DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
TACTICAL TECHNOLOGY OFFICE (TTO)
PLANNED PROCUREMENTS
December 2001

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
High Power Fiber Lasers (HPFL): High power fiber lasers have the potential to become one of the principal technologies for defense against the rapidly proliferating unmanned airborne threats. The High Power Fiber Lasers program will develop and demonstrate single mode fiber lasers with output powers of nearly one kilowatt from a single aperture. Tens of kilowatts output power and capability to scale to greater than 100s of kilowatts output power and beyond will be demonstrated through coherent combining of the output power from multiple fiber lasers. This program has two separate tasks. In Task 1, single mode fiber lasers with output powers of one kilowatt or greater from a single aperture shall be developed and demonstrated. In Task 2, tens of kilowatts output power and capability to scale to greater than 100s of kilowatts output power and beyond shall be demonstrated through coherent combining of the output power from multiple single mode fiber lasers.	TBD	BAA 02-02 First round due: 01/10/02 Open through: 10/15/02 Total program: 4 years	Dr. L. N. Durvasula TTO
Responsive Access, Small Cargo, Affordable Launch (RASCAL): The objective of the RASCAL program is to design and develop a low-cost orbital insertion capability for dedicated micro-size satellite payloads. The concept is to develop a responsive, routine, small payload delivery system capable of providing flexible access to space using a combination of reusable and low-cost expendable vehicle elements. The RASCAL system will be comprised of a reusable "airplane-like" first stage vehicle (RLV) and a second stage expendable rocket vehicle (ERV). The RASCAL demonstration objectives are to place satellites and commodity payloads, between 50 and 130 kilograms in weight, into low earth orbit at any time, any inclination with launch efficiency of $20,000 per kilogram or less. While the cost goal is commensurate with current large payload launch systems, the operational system, through production economies of scale, will be more than a factor of three less than current capabilities for the dedicated micro payload size. This capability will enable cost-effective use of on-orbit replacement and re-supply and provide a means for rapid launch of orbital assets for changing national security needs.	$88M	PS 02-02 Proposals due: 2/4/02 Total program: 6 years	Mr. Preston H. Carter TTO
UCAR Risk Reduction Technologies: The Unmanned Combat Armed Rotorcraft program is developing the capability to conduct mobile strike missions on the 2010 battlefield. Key enabling technologies include obstacle avoidance and long range target identification. Sensor technologies capable of wire, terrain, and aircraft avoidance, and of target identification at 6-10 km slant range are of interest. These risk reduction activities will be conducted in parallel with the prime contractor studies and system development efforts.	TBD	DAAB07-02-R-L404 Proposals due: 12/14/01 Total program: 1 year	Dr. Don Woodbury TTO

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Innovative Tactical Technology: The Innovative Tactical Technology program seeks to research and design system- and sub-system-level technology for integration into the tactical environment to supplement, replace, support, or enhance existing systems. DARPA TTO has four primary focus areas: (1) aeronautic systems; (2) space systems; (3) land systems; and (4) embedded processors and control systems. The intent of this program is to sponsor the development and/or the demonstration of system or sub-system technologies that provide revolutionary improvements to the efficiency and effectiveness of the military relative to current modes of operation.	TBD	BAA 01-45 Open through: 9/13/02	Dr. Bob Rosenfeld TTO